

***I-405***  
***CORRIDOR PROGRAM***

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**I-405 CORRIDOR PROGRAM  
FRAMEWORK REPORT**

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# I-405 CORRIDOR PROGRAM FRAMEWORK REPORT

This draft report recommends a framework for accomplishing the I-405 Corridor Program that will be critical in gaining consensus for developing and implementing corridor improvements. Included is an organizational structure that assures leadership and involvement by impacted stakeholders, and a decision-making structure that integrates selection of alternatives with public involvement and the environmental process. The Executive Committee will be asked to approve the proposed approach, including consideration of several key questions relative to committees and decision-making processes.

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## Background

Before the turn of the 19th century, Native Americans and homesteaders could live off the land along the south, east and northern shores of Lake Washington, relying on farming, hunting and fishing for survival. Early industry in this untamed land included logging, shipbuilding and coal mining, with rivers, lakes and the railroad serving as the preferred routes for freight transport. Few roads penetrated the dense inland forests; those that did, like the Bothell Brick Road, linked Seattle with remote logging or industrial operations. The first real road system connecting the Lake Washington communities didn't take shape until the 1920s.

**Figure One: Lacey V. Murrow Floating Bridge (1940)**

Even with the opening in 1940 of the Lacey V. Murrow (now I-90) floating bridge, the area retained its rural, agricultural character throughout the 1950s. Construction in the early 1960s of the 30-mile Interstate 405 provided a freight bypass for Interstate 5 through Seattle, but it also opened the Lake Washington countryside to development. Construction of the Evergreen Point (SR 520) floating bridge in 1963 further set the stage for the changing demographics.





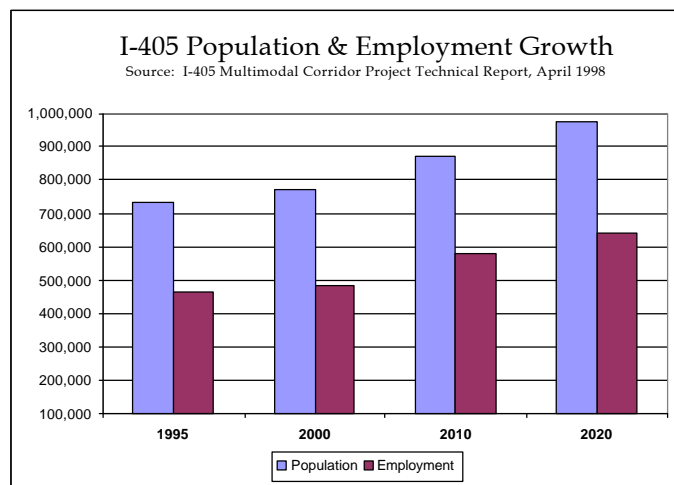
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## Growth

Today, I-405 has changed dramatically from a Seattle bypass to become the roadway of choice for most north-south trips for the area surrounding Lake Washington. More than two-thirds of the total trips on I-405 begin and end in the corridor itself. The remaining third have strong ties with the communities along SR 167 to the south and the developing areas to the east.

With I-405 as the backbone of the Lake Washington communities transportation system, the growing traffic congestion along the corridor has serious implications for personal and freight mobility, the State and regional economy, the environment and residents' quality of life. Growth projections suggest that the problem will worsen in the future: between 1970 and 1990, communities in the area affected by I-405 grew much faster than the Central Puget Sound Region as a whole). Over the 20-year period, employment in the affected area increased 200% from 94,500 to 285,100 and population rose 66 percent from 285,800 to 474,200. (Source: Puget Sound Regional Council, 1995)

**Figure Two: I-405 Corridor Population & Employment Growth**



Growth in the corridor area through 2020 will likely continue to outpace regional growth in the Puget Sound region. Whereas the region's population and employment will increase 37% and 47% respectively, the I-405 corridor population and employment growth will increase by over 70%. Total vehicle miles of travel in 2020 will be 37% higher than 1990 (see **Figure Two: I-405 Corridor Population & Employment Growth**).

Absent any major investment or change in travel patterns in the corridor between now and 2020, travel delay will increase 250% on I-405 and 350% on local arterials between 1990 and 2020 in the PM peak period. Several segments of I-405, I-90, SR 520 and corridor arterials will experience more than five hours of congestion per day in 2020. (Source: Washington State Department of Transportation's Annual Traffic Report, 1970-1996.)

Considerable work has been done at the local and regional level to provide solutions. The State has been making continuous improvements to I-405 as the area has grown, but the corridor remains heavily congested. Cities, counties and the state have proposed improvements through the Puget Sound Regional Council's Metropolitan Transportation Plan and sub-regional action plans. Yet, the I-405 Corridor remains a major concern in the absence of an agreed upon regional strategy that will address travel needs, accommodate future growth, provide for a sustainable environment and allow for livable communities.





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## I-405 Multimodal Corridor Project 1993- 1998

Public officials' awareness of these trends helped initiate a comprehensive study of the I-405 corridor in 1993. The Washington State Department of Transportation's I-405 Multimodal Corridor Project successfully identified and evaluated a wide range of multimodal improvements to enhance mobility within the corridor. Recognizing the need for a subsequent public and environmental process to set the stage for selection and implementation of corridor improvements, the 1998 State Legislature provided funding for a partnership of state, federal, regional and local decision-makers. What is now known as the I-405 Corridor Program will establish the best package of programs and improvements that can be realistically implemented over the next 20 to 30 years.

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## I-405 Corridor Program



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### Purpose

The I-405 Corridor Program will utilize the information developed in the I-405 Multimodal Corridor Project to define the package of transportation improvements that best meets future travel needs in the corridor. It will also include a broad public involvement program and NEPA (National Environmental Policy Act) and SEPA (State Environmental Policy Act) environmental review. The environmental analysis will identify significant differences in performance, impacts, and opportunities for mitigation among each alternative package, and support federal, state and local decisions. A comprehensive public involvement plan, closely coordinated with the environmental process, will secure stakeholder participation in the study. The component actions of the preferred plan will be proposed for adoption into local, regional, state and federal transportation plans and programs.



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### Study Area

The study area for the I-405 Corridor Program is divided into Primary and Secondary areas (see **Figure Three: Study Area Boundaries**).



**Figure Three: Study Area Boundaries**



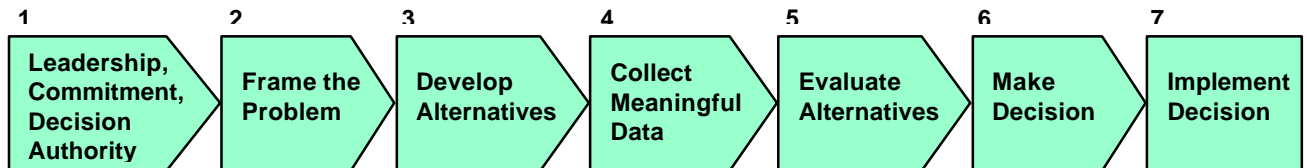
The Primary Study Area defines the boundaries within which the range of alternatives will be identified; the Secondary Study Area denotes a much broader area within which indirect and cumulative environmental impacts of the alternatives may be evident. The Primary study area includes the Cities of Bothell, Woodinville, Kirkland, Redmond, Bellevue, Mercer Island, Newcastle, Renton and Tukwila, as well as portions of the Cities of Lynnwood, Issaquah and Kent, and adjacent unincorporated areas of King and Snohomish counties. The Secondary study area is contiguous with the East King County Corridor Needs Study. It encompasses East King County, Seattle, South Snohomish County and North Pierce County. To the extent that the I-405 Program or related efforts identify potential alternatives within the Secondary study area, the Primary study area can be enlarged to accommodate such alternatives.

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## Decision Process: I-405 Seven-Step Decision Framework

The I-405 Corridor Program is, in effect, a decision process for multiple jurisdictions, agencies and interest groups holding potentially competing values and agendas. Within this environment, the I-405 Project Team recommends a "Decision Framework" to guide and support the process. Decision processes for other recent projects and programs illustrate that all effective decision frameworks follow a series of steps, from establishing clear leadership and commitment to implementing the decision. Thus, a basic seven-step decision framework is recommended for the I-405 project.

**Figure Four: Seven-Step Decision Framework**




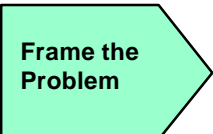

This model also tracks closely with and matches the intent of the Washington State Department of Transportation's newly adopted quality initiatives. Each step carries with it specific tasks or decision-points to move the process forward. These are listed below in **Table One: I-405 Corridor Program Decision Steps**. The following section on

The Decision Framework in Action expands upon these steps for the I-405 Corridor Program, including recommendations for the organizational structure, communication plan, public involvement program, alternative development/environmental process, and decision tools.





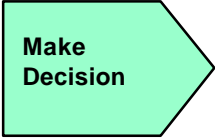
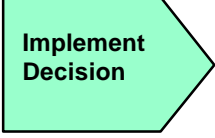
Table One: I-405 Corridor Program Decision Steps

| STEP  | KEY COMPONENT                   | DESCRIPTION  |
|---|---------------------------------|--|
|  | <i>Decision Authority</i>       | <ul style="list-style-type: none"> <li>➤ Identify who makes which decision at each stage of the process</li> <li>➤ Define the process for agency consultation and what constitutes agency agreement</li> </ul>                             |
|   | <i>Organizational Structure</i> | <ul style="list-style-type: none"> <li>➤ Select organizational structure (e.g., task force, steering committee, etc.) that best meets the desired outcome and meets the involvement issues</li> <li>➤ Define the players' roles</li> </ul> |
|   | <i>Community Involvement</i>    | <ul style="list-style-type: none"> <li>➤ Define areas of/opportunities for public involvement</li> </ul>   |
|   | <i>Resource Agencies</i>        | <ul style="list-style-type: none"> <li>➤ Define resource agency involvement</li> </ul>   |
|   | <i>Communication Plan</i>       | <ul style="list-style-type: none"> <li>➤ Establish appropriate combination of formal and informal communication within the proposed organizational structure</li> </ul>  |

| STEP  | KEY COMPONENT                          | DESCRIPTION  |
|---|--|--|
|  | <i>Vision</i>                          | <ul style="list-style-type: none"> <li>➤ Create a snapshot of the desired outcome</li> </ul>   |
|   | <i>Constraints</i>                     | <ul style="list-style-type: none"> <li>➤ Set the bounds of the decision process</li> <li>➤ Identify physical fiscal and policy constraints</li> </ul>  |
|   | <i>Objectives</i>                      | <ul style="list-style-type: none"> <li>➤ Define the problems we are trying to solve</li> <li>➤ Describe the measures of success</li> </ul>   |
|  | <i>Alternative Development Process</i> | <ul style="list-style-type: none"> <li>➤ Clarify linkage with alternatives from I-405 MCP</li> <li>➤ Perform interim screening to get to a set of EIS alternatives</li> <li>➤ Define distinct categories/packages of alternatives</li> <li>➤ Clarify responses to micro-issues in the corridor such as ramps and queue back-ups</li> <li>➤ Address development and incorporation of mitigations both directly into design features and as add-ons</li> <li>➤ Identify appropriate data that will differentiate among alternatives</li> </ul> |



| STEP  | KEY COMPONENT | DESCRIPTION  |
|---|---------------|--|
|  | <i>Tools</i>  | <ul style="list-style-type: none"> <li>➤ Array decision tools that will provide value to the process, e.g. meeting facilitation, models, criteria</li> </ul> |

| STEP  | KEY COMPONENT             | DESCRIPTION  |
|---|---------------------------|--|
|    | <i>Select Alternative</i> | <ul style="list-style-type: none"> <li>➤ Anticipate nature of potential decision</li> <li>➤ Identify and prepare decision-makers for action</li> <li>➤ Minimize downstream process requirements that could disrupt prior decisions</li> </ul>    |
|   | <i>Communication</i>      | <ul style="list-style-type: none"> <li>➤ Educate the community on the progress of the decision</li> </ul>  |
|  | <i>Action Plan</i>        | <ul style="list-style-type: none"> <li>➤ Clarify implementation steps and roles</li> <li>➤ Expedite the flow of planning, funding, regulatory approval, and implementation of decisions</li> <li>➤ Monitor implementation performance</li> </ul> |

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## The Decision Framework in Action




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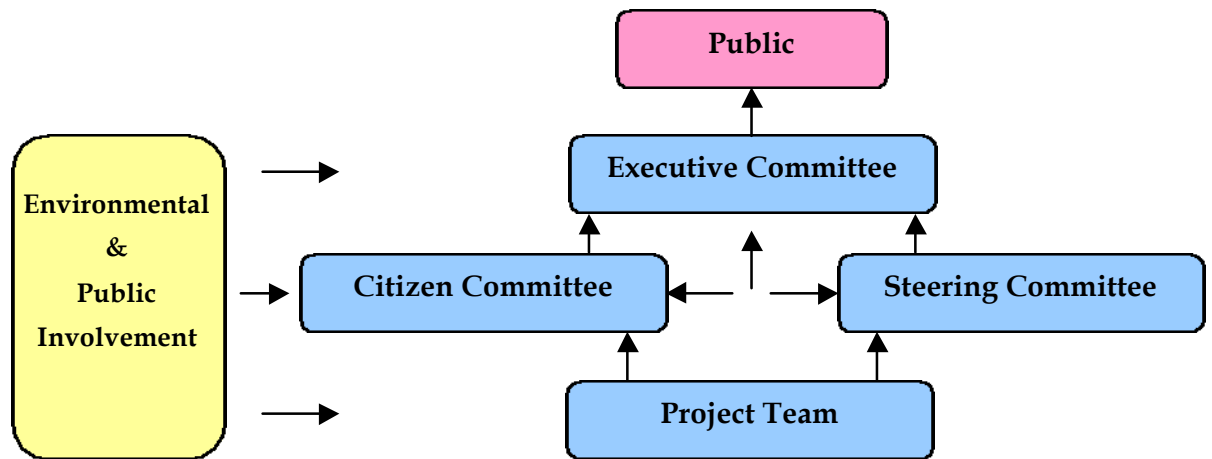
### Organizational Structure



An organizational structure identifies leadership and defines decision authority. The Project Management Team recommends the following structure (see **Figure Five: Recommended I-405 Corridor Program Committee Structure**).



Figure Five: Recommended I-405 Corridor Program Committee Structure



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## Executive Committee

The Executive Committee structure provides a balance of local and regional representation, while maintaining a workable size. The Committee's roles and responsibilities include approving the Program approach, decision process, public involvement, and providing policy direction. Their goal should be to build a consensus on dealing with the mobility interest in the I-405 corridor and seeing it implemented. They should represent and report on study activities to other groups and organizations, as appropriate. Members will also represent the agencies to which they belong.

The members on this committee include elected officials from local municipalities (Bellevue, Kirkland, Bothell, Tukwila, Renton, Newcastle,), and federal, state and regional officials (King County, Washington Transportation Commission, Puget Sound Regional Council Board, Sound Transit Board, the Federal Highway Administration, Federal Transit Administration, Snohomish Co./Community Transit, Washington State Department of Transportation). Ex-officio legislative members will also be part of this committee.

Question for consideration:

- Other possible regular and ex officio members (Tribes, Citizens Committee members? See Citizens Committee below).

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## Citizens Committee

The Executive Committee will appoint a Citizens Committee, which will consist of interested parties from business and environmental groups, neighborhood associations, freight interests, and other corridor perspectives. The Citizen Committee is primarily



responsible for providing valuable input to the development and evaluation of corridor alternatives. As envisioned, the citizen committee will be involved at key points during the alternatives scoping and analysis process.

Questions for consideration:

- Committee membership .
- Whether to appoint separate committees broken by geographic boundaries.
- Inclusion of committee interests on the Executive Committee. In particular, it has been suggested that key environmental and business interests also be represented directly on the Executive Committee.

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## Steering Committee

The Executive Committee will appoint a Steering Committee, proposed to include regulatory agencies, tribes, and senior staff from participating transportation agencies. Steering Committee responsibilities will include approval of environmental and technical work, ongoing policy guidance and technical direction to the Project Management Team, and also serving as a conduit to the Executive Committee representatives.

Questions for consideration:

- Membership from jurisdictions not directly represented on the Executive Committee (e.g. Woodinville, Redmond, Issaquah)
- Inclusion of certain member groups on the Executive Committee. In particular, it has been suggested that Tribal representation would be most appropriate at the Executive Committee.

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## Project Management Team

The Washington State Department of Transportation Office of Urban Mobility's project manager for the I-405 Corridor program and his consultant team comprise the Project Management Team. They will provide day-to-day guidance to the project and process, as well as staff support to the Executive, Citizen's and Steering Committees. They will provide timely and adequate communication, report on progress, identify issues and recommend actions to the Steering Committee.



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## Communication Plan

An active public involvement effort will operate throughout the life of the Program, beginning as the Program structure is put in place and building to a high level of activity during development and evaluation of alternatives. At each phase of the I-405 Corridor Program, the public involvement plan provides multiple opportunities for community involvement. Proven public outreach tools will be combined with novel and innovative methods that take advantage of new technologies. These will be promoted and



publicized aggressively to ensure they are understood and utilized by our target audiences. The public involvement program will also support and inform the Committees throughout the decision-making. Public, as well as technical, input will benefit the Committees throughout the duration of the Program.

## Public Involvement Program

The public involvement program will build local and regional consensus leading to decisions about major I-405 investments by securing significant citizen participation in the study. After a decision-making framework and process are finalized, the public involvement process outlined in this plan tracks the phases of the environmental review process (See **Figure Four: Seven-Step Decision Framework**). The public involvement goals for each stage of the plan are noted below:

- Mobilization: Begin research, establish web site and telephone infoline, develop all tools and prepare all activities needed in the next project phase.
- Program Orientation/ Alternatives Identification: Provide stakeholder and agency orientation on the I-405 Corridor Program and solicit public input on the initial range of possible alternatives and issues to be addressed.
- Detailed Evaluation/Preferred Alternatives: Present the results of the screening process and conduct outreach to educate citizen audiences about them and obtain their feedback.
- Consensus Development: Develop stakeholder consensus of support or (at least) acceptance for the preferred alternative package.

## Vision and Alternative Development/Environmental Process

### Frame the Problem

The Committees first charge will be to identify a vision for the Corridor as a way to begin framing the issues. This vision will then be distilled into a Purpose and Need Statement for the environmental process. The Project Management Team, with input from the committees, will then formulate a number of reasonable and feasible alternatives that meet established criteria and respond to the identified Purpose and Need Statement. The Project Management Team will analyze those reasonable and feasible alternatives through two stages of a programmatic or corridor-level Environmental Impact Statement that meets NEPA and SEPA requirements.

### Develop Alternatives

During the early part of alternatives development and refinement, the evaluation will focus on the performance, feasibility and cost-effectiveness of the alternatives. When a range of reasonable and feasible alternatives has been confirmed, more detailed environmental studies will be conducted to identify the corridor-level environmental effects of and mitigation opportunities for each alternative.



This approach also meets the new Federal environmental requirements under the 1998 TEA-21 legislation. In an effort to reinvent the NEPA process the Federal Highway Administration, Federal Transit Administration, U.S. Environmental Protection Agency and other Federal and State resource agencies will have earlier involvement in program and project planning and development. The intent of moving environmental decisions into the planning process is to reduce uncertainty and expedite project review when detailed documents are submitted for Federal review.

The outcome will be NEPA and SEPA environmental clearance for a corridor-level preferred alternative. That preferred alternative will be included in the Washington Transportation Plan, the Spring 2001 update of the Puget Sound Regional Council's Metropolitan Transportation Plan as well as the comprehensive plans of local jurisdictions. The preferred alternative, or selected projects that are components of the alternative, likely will require subsequent project-level NEPA and/or SEPA environmental review prior to application for resource and construction permits.



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## Decision Toolbox

### Collect Meaningful Data

The goal of the I-405 Corridor Program is to select a preferred alternative package that can be implemented over the next 20 to 30 years. To assist the decision process, the Program will develop performance-based information on travel demand and forecasts, as well as benefit-cost analysis against which a set of alternatives may be evaluated.

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## Alternatives Analysis

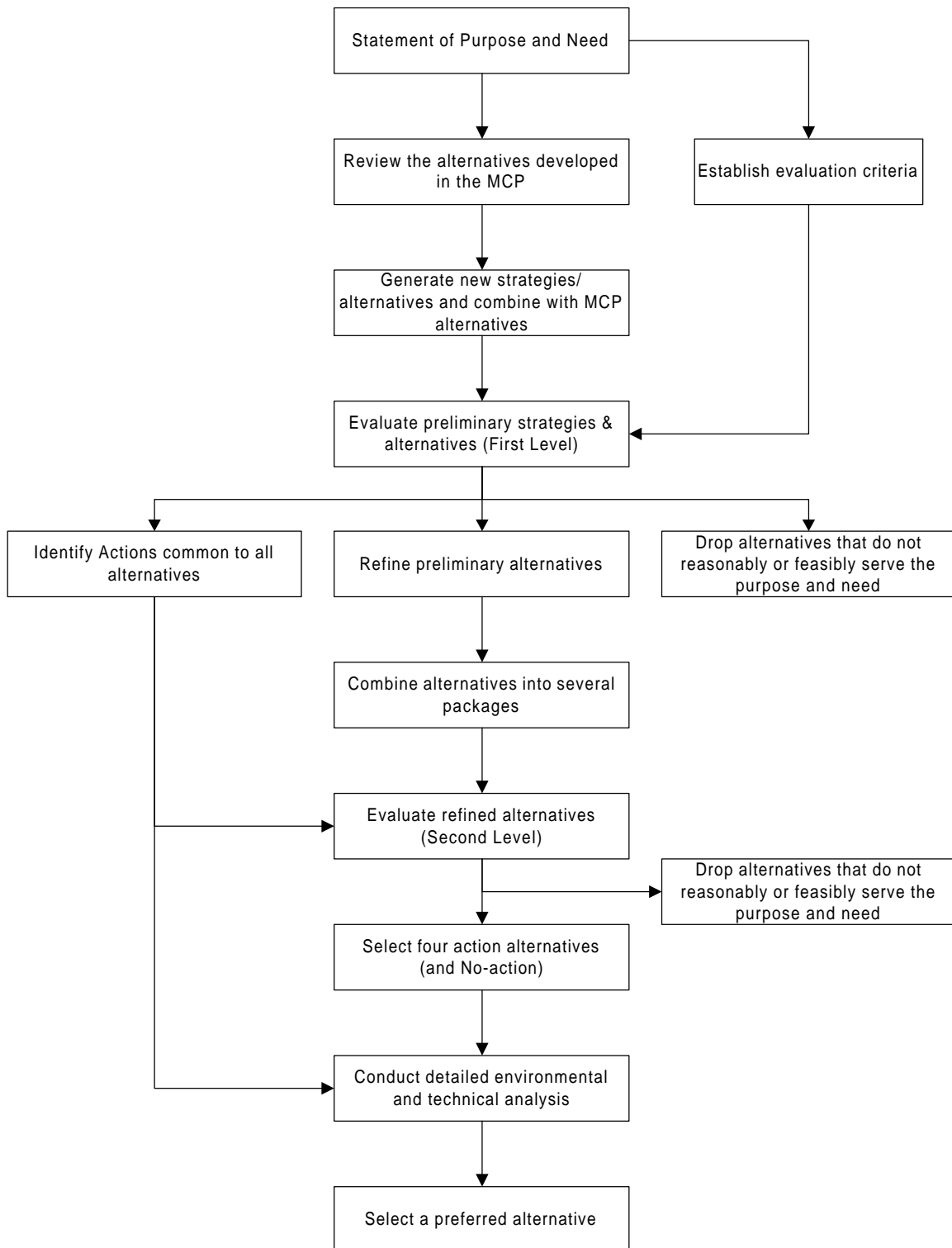
### Evaluate Alternatives

An alternative analysis process develops and analyzes a range of alternative improvements and programs against established evaluation criteria to meet a defined goal. One common method for developing packages of alternatives groups potential actions by themes (e.g. level of investment, transportation mode, responsibility or ownership). A second compares discrete improvements against each other (e.g. HOV lanes compared to higher transit levels of service).

The magnitude and duration of the alternatives analysis exercise can be affected by the choice of starting points in defining the alternatives and the number of alternatives to be analyzed. The Project Management Team's recommended process will incorporate information obtained in the 1998 Multi-Corridor Planning Study. With a public process, those alternatives would be refined and packaged into a new set for evaluation, following the process shown in **Figure Six: Alternatives Analysis Process**. The alternatives go through a two-step screening process, which cumulatively reduces the number of options under consideration. A preferred alternative would be selected from among four alternatives and a no-action alternative.



**Figure Six: Alternatives Analysis Process**





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## Travel Modeling

Travel Demand Forecasting Models produce information enabling decision-makers to compare various investment alternatives against performance measures such as travel times between activity centers, hours of congestion, vehicle miles of travel and vehicle hours of travel. Because the demand forecasts are subject to the assumptions built into the model, the model will be validated to assess how well it replicates existing travel patterns in any given study area.

For the I-405 Corridor Program, the current version of the Puget Sound Regional Council's four-county travel demand forecasting model will be used, as modified during the Trans-Lake Washington Study. The PSRC model is multimodal and captures both regional and corridor level trips. The model will be adjusted to 1) include added transit network details for cross-lake travel; 2) match Sound Transit's estimates from their more detailed three-county transit model; and, 3) better reflect traffic assignments between freeways and arterials based upon relative speeds.

As part of the model validation for the I-405 Corridor Program, the model will be tested to assess how well it replicates 1995 travel patterns in the I-405 study area, including confirming that it makes reasonable estimates of auto and transit trips at the corridor level and at specific locations. Once the model has been validated, it will produce future year (2020) baseline forecasts as well as forecasts for the alternatives. Findings from the model can be used for the comparative analysis of system performance across major alternatives. At a later stage in the alternatives evaluation process, more detailed traffic operational analyses will be conducted to assess more localized traffic impacts as well as ways to mitigate potential negative impacts.

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## Performance Measures

An important step in the decision process will be to agree on the performance measures used to evaluate the effectiveness of the corridor alternatives in meeting the purpose and need of the improvements. Care will be taken to craft performance measures that are sensitive to the differences among widely different alternatives, such as the comparison between freeway widening and expanded transit service. The objective is to fairly examine the strengths and weaknesses of each alternative without being judgmental regarding performance.

Performance measures will be developed to cover the following:

- Transportation Performance – hours of congestion, travel times/speeds, modal use
- Environmental Impacts – natural and physical environment
- Land Use/Economic Impacts- residential/business impacts, accessibility to employment and shopping
- Financial – equity, financial feasibility

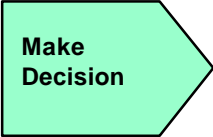


The Project Team also proposes developing an independent economic analysis of system alternatives using benefit/cost analysis or cost-effectiveness calculations. Additional information will also be available relative to a least-cost analysis of individual projects and/or key mode alternatives, and system efficiency.




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## The Decision and Its Implementation



**Make  
Decision**



**Implement  
Decision**

This decision process will be considered a success only upon implementation of the preferred alternative. Of course, project implementation requires strategic thinking during project planning and development to eliminate obstacles before they become insurmountable. Toward that end, the I-405 Corridor Program must have vision, rigor and credibility. But more importantly, project implementation requires leadership and commitment after the Program is adopted. The I-405 Corridor Program presents a singular partnership opportunity whereby leaders from the Lake Washington communities, Puget Sound region, State and Federal governments can work together to develop a transportation strategy that will support a robust regional and State economy, a healthy environment and vibrant communities.